

## ABSTRACT

Methods, systems, and computer program products for improving validation of data. Validation is coupled with, or encapsulated with, the data values to which the data validation pertains, thereby becoming a part of the data model itself. This approach enables real-time data validation, as a user interacts with a data model through an executing application or GUI window interface.

In some embodiments, the data model (and the encapsulated validation) is expressed using markup language notation.

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